BIOL 2117L - Introductory Microbiology Lab (version 201003L)

Course Title	Course Development	Learning Support
Introductory Microbiology Lab	Standard	No

Course Description

Selected laboratory exercises paralleling the topics in BIOL 2117. The laboratory exercises for this course include microbial diversity, microbial cell biology, microbial genetics, interactions and impact of microorganisms and humans, and microorganisms and human disease.

Pre-requisites

BIOL 2113 and BIOL 2113L OR BIOL 1111 and BIOL 1111L

Regstr. Co-requisites

Regstr. Co-requisites: None

True Co-requisites

True Co-requisites: All Required

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Course Length

	Lecture Contact Time	Regular Lab Type	Reg. Lab Contact Time	Other Lab Type	Oth. Lab Contact Time	Total Contact Hrs
Contact Hours Per Week	**0 hrs**	**N/A**	**0 hrs**	**Lab**	**3 hrs**	**3 hrs**
Contact Min/Hrs Per Semester	**0 min**		**0 min**		**2250 min**	**45 hrs**

	Lecture Credit Hours	Lab Credit Hours	Total Credit hours	WLU
Semester Credit Hours	**0**	**1**	**1**	**56.25**

Competencies & Outcomes

Order	Description

1 **Laboratory Safety**

Order	Description	Learning Domain	Level of Learning
1	Discuss and apply laboratory exercises encompassing the appropriate practice of laboratory precautions and laboratory safety.	Cognitive	Comprehension

2 **Microscope Use**

Order	Description	Learning Domain	Level of Learning
1	Discuss and use laboratory exercises encompassing proper care and use of the microscope.	Cognitive	Comprehension

3 **Aseptic Technique**

Order	Description	Learning Domain	Level of Learning

1	Discuss and use laboratory exercises encompassing the practice and utilization of aseptic technique. For example, evaluate sterility testing procedures.	Cognitive	Comprehension

4 **Microbial Growth**

Order	Description	Learning Domain	Level of Learning
1	Discuss and use laboratory exercises encompassing control of microbial growth. Examples include estimate the number of microbes in a culture medium by both direct and indirect methods, use appropriate microbiological media and test systems, cultivate specific microorganisms in various media.	Cognitive	Comprehension

5 **Microbial Diversity**

Order	Description	Learning Domain	Level of Learning
1	Perform and apply laboratory exercises encompassing microbial diversity. For example, use staining techniques to classify specific organisms.	Cognitive	Synthesis

6 **Microbial Cell Biology**

Order	Description	Learning Domain	Level of Learning
1	Perform and apply laboratory exercises encompassing microbial cell biology. Examples include identify common gram negative and gram positive bacteria, execute various staining techniques in order to study the morphology of microorganism.	Cognitive	Synthesis

7 **Microbial Genetics**

Order	Description	Learning Domain	Level of Learning
1	Perform and apply laboratory exercises encompassing microbial genetics.	Cognitive	Synthesis

8 **Interactions and Impact of Microorganisms (this may include Biosafety Level 1 and/or Level 2 Pathogens) with humans**

Order	Description	Learning Domain	Level of Learning
1	Perform and apply laboratory exercises encompassing interactions and impact of microorganisms and humans. Examples include determine antibiotic sensitivity, determine the impact of various disinfectants and antiseptics on microorganisms, perform tests for detecting microbial infections.	Cognitive	Synthesis

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